



**US Army Corps
of Engineers**
North Central Division

GREAT LAKES LEVELS

UPDATE, NO. 6

6 January 1986

Now that the New Year has begun, it is appropriate to summarize last year's Great Lakes conditions. The year 1985 will be long remembered by users of the Great Lakes. Precipitation throughout the Great Lakes basin has been generally above normal for the past several years, so we came into the year wet. At the beginning of 1985, the middle Great Lakes (Michigan, Huron, St. Clair and Erie) were more than 1-½ feet above their long-term mean monthly levels. Lake Superior was about ½ foot above its mean level and Lake Ontario was near its mean level.

Heavy precipitation over the basin in February and March caused new record high levels to be set on Lake St. Clair in March and on Lakes Michigan, Huron and St. Clair in April and May. In April, the IJC directed its International Lake Superior Board of Control to reduce Lake Superior outflow by about 30 percent below the flows prescribed by Plan 1977, the regulation plan for Lake Superior. The objective of that emergency action by the IJC was to alleviate harm, to the extent possible, due to high levels on the middle Great Lakes by bringing them into balance with the Lake Superior levels while not exceeding, as nearly as may be, the level of 602 feet on Lake Superior.

However, heavy precipitation on the Lake Superior basin commencing in July required the IJC to direct an increase in the Lake Superior outflow, which included at times the release of additional water through the United States and Canadian navigation locks. From mid-October until the winter gate setting was made in the Compensating Works in mid-December, the outflow from Lake Superior was at a record rate of about 133,000 cfs. Despite these efforts, the Lake Superior level set a new all-time record high of 602.24 feet in October 1985.

Meanwhile, continued heavy precipitation, up to between 2 and 3 times normal on some lake basins, fell throughout the Great Lakes region. This resulted in additional new record high mean monthly levels being set on Lake Superior and St. Clair for the months September through December, Lakes Michigan-Huron in October through December and Lake Erie in November and December. Lake Ontario, which had near normal levels for much of the year, began to rise more sharply in November due to extremely heavy precipitation on its basin. The previous record high levels for December were exceeded by about 10 inches on Lake St. Clair, about 9 inches on Lakes Michigan-Huron, about 5 inches on Lake Erie and about 3 inches on Lake Superior.

On 2 December, a storm with winds near 70 miles per hour caused the water level at Buffalo to set a new record high instantaneous level of 580.68 feet. Extensive flooding occurred along the eastern end of Lake Erie and the upper Niagara River.

The outlook is for all the lakes to remain near or above record high levels for the first half of 1986 at least.

The Corps of Engineers is authorized under Public Law 84-99 to carry out preventive work prior to a flood threat to life or improved property — such a program, known as Advance Measures, was initiated in 1985 and is underway at potential flooding sites in certain shoreline communities in cooperation with the States of Michigan and Ohio in 1985.

The objective of the Advance Measures program was to construct emergency flood protection projects at eligible and locally receptive locations prior to onset of the fall and winter storm seasons, which usually begin in November. Initially, all flood prone locations along the shores of Lakes Michigan, Huron, St. Clair and Erie, as well as the Detroit River, were considered and about 25 projects were identified. Projects were actually developed and approved at five locations in Michigan. These projects are Luna Pier, Estral Beach, Detroit Beach in Frenchtown Township and Labo Island and Milleman in Brownstown Township. In Ohio, three projects were approved: Reno Beach/Howard Farms, Whites Landing and Bayview. All other potential locations were either ineligible or have declined participation in the program. At the close of 1985, construction was underway on five projects in Michigan and one project in Ohio.


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For Great Lakes basin technical assistance or information, please contact one of the following Corps of Engineers District offices:

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The updates will be continued for the next few months to provide additional information on the actions being taken to help alleviate high water level conditions and to provide flood protection and assistance.


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